

CLAIMS

1. Expandable intragastric balloon designed to be implanted in the stomach of a patient for the treatment of obesity and comprising an outer casing (2) that is sufficiently flexible to pass from a reduced-volume configuration to an expanded configuration, thereby imparting the balloon (1) with its functional shape, characterized in that it comprises means for forming (3) the outer casing (2), which are structurally integrated into the balloon (1) and primarily separate from the outer casing (2), said forming means (3) being capable of being actuated, once the balloon (1) has been implanted, on the one hand, in order to exert a sufficient driving pressure on the outer casing (2) to force it to deploy and, on the other hand, to occupy a sufficient volume inside said outer casing (2) to ensure the deployment of the outer casing (2) from its reduced-volume configuration to its expanded configuration.

2. Intragastric balloon of claim 1, characterized in that the forming means (3) consist of an inflation chamber (4), which is different from the outer casing (2) and which is arranged inside thereof so as to ensure its formation by the introduction of an inflating fluid into said inflation chamber (4).

3. Intragastric balloon of claim 2, characterized in that the inflation chamber (4) and the outer casing (2) are shaped such that, when the inflation chamber (4) occupies its expanded position, the outer casing (2) substantially matches the shape of said inflation chamber (4).

4. Intragastric balloon as claimed in claim 2 or 3, characterized in that the inflation chamber (4) consists of an inner pouch (5) that is sufficiently flexible to pass from a reduced-volume position to an expanded position.

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5. Intragastric balloon of claim 4, characterized in that the inner pouch (5) consists of an elastomer material.

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6. Intragastric balloon as claimed in claim 4 or 5, characterized in that the inner pouch (5) is defined by a wall (6) including at least one shield that is substantially impervious to gases.

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7. Intragastric balloon of claim 6, characterized in that the shield includes in its composition at least one polymer having a gas barrier effect.

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8. Intragastric balloon of claim 7, characterized in that the shield consists of one or more thermoplastic polymers having a gas barrier effect.

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9. Intragastric balloon of claim 8, characterized in that the shield consists of one or more polymers selected from the group of polymers having a gas barrier effect, such as ethylene vinyl alcohol (EVOH), poly(vinylidene chloride) (PVDC), polyacrylonitrile (PAN), polyamide (PA), bi-oriented polyamide, poly(ethylene terephthalate) (PET), bi-oriented poly(ethylene terephthalate), and thermoplastic elastomer polyurethane.

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10. Intragastric balloon as claimed in one of claims 4 to 9, characterized in that the inner pouch (5) consists of at least one thermoplastic elastomer polyurethane film.

11. Intragastric balloon as claimed in one of the preceding claims, characterized in that the outer casing (2) consists of a bio-compatible material.

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12. Intragastric balloon as claimed in one of the preceding claims, characterized in that the outer casing (2) consists of an elastomer material.

10 13. Intragastric balloon of claim 12, characterized in that the outer casing (2) is made of silicone.

14. Intragastric balloon of claim 13, characterized in that the silicone is colored white by treating with barium sulfate.

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15. Intragastric balloon as claimed in one of the preceding claims, characterized in that the outer casing (2) is covered with parylene.

20 16. Intragastric balloon as claimed in one of claims 2 to 15, characterized in that the inflating fluid is a gas.

17. Intragastric balloon as claimed in one of claims 2 to 16, characterized in that the inflation chamber (4) is designed to  
25 have a substantially spherical shape, in its expanded position.

18. Intragastric balloon as claimed in one of claims 2 to 17, characterized in that the inflation chamber (4) and the outer casing (2) are substantially movable in relation to each other.

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19. Intragastric balloon as claimed in one of claims 2 to 18, characterized in that the inflation chamber (4) and the outer casing (2) are substantially concentric.

5 20. Intragastric balloon as claimed in one of claims 2 to 19, characterized in that the inflation chamber (4) is covered with parylene.